

What is claimed is:

1 1. A method for designing tree-structured communication routes,
2 in which plural ingress nodes, a single egress node, plural connection
3 nodes situated between said plural ingress nodes and said single
4 egress node, and plural routes starting from said plural ingress nodes
5 to said single egress node via said plural connection nodes are given,
6 comprising the steps of:

7 adding a predetermined point to a score of a route successively
8 selected from said plural routes,

9 successively selecting said routes in reverse order of said
10 scores of said routes,

11 respectively generating trees from said route with a lowest
12 score and said other routes, and

13 successively generating other trees from said routes which are
14 unable to generate said trees,

15 wherein said step of adding said predetermined point to said
16 score of said selected route is carried out whenever either of

17 (3) a first condition that any node in a selected route does
18 not appear on another route except said egress node, or

19 (4) a second condition that, when there is a node which appears
20 in both said selected and another routes, said selected
21 route agrees with said another route from said node to said
22 egress node,

23 is satisfied.

1 2. The method for designing tree-structured communication route
2 as defined in claim 1, wherein:

3 said predetermined point to be added to said score of said
4 selected route is +1 point.

1 3. The method for designing tree-structured communication route
2 as defined in claim 1, wherein:

3 said route is regarded as a route or a tree.

1 A. A tree-structure solution derived by mean of a method for
2 designing tree-structured communication routes, in which plural
3 ingress nodes, a single egress node, plural connection nodes situated
4 between said plural ingress nodes and said single egress node, and
5 plural routes starting from said plural ingress nodes to said single
6 egress node via said plural connection nodes are given, comprising
7 the steps of:

8 adding a predetermined point to a score of a route successively
9 selected from said plural routes,

10 successively selecting said routes in reverse order of said
11 scores of said routes,

12 respectively generating trees from said route with a lowest
13 score and said other routes, and

14 successively generating other trees from said routes which are
15 unable to generate said trees,

16 wherein said step of adding said predetermined point to said
17 score of said selected route is carried out whenever either of

18 (1) a first condition that any node in a selected route does
19 not appear on another route except said egress node, or

20 (2) a second condition that, when there is a node which appears
21 in both said selected and another routes, said selected

22 route agrees with said another route from said node to said
23 egress node,
24 is satisfied.

1 5. A recording medium recording a tree-structure solution
2 derived by means of a method for designing tree-structured
3 communication routes, in which plural ingress nodes, a single egress
4 node, plural connection nodes situated between said plural ingress
5 nodes and said single egress node, and plural routes starting from
6 said plural ingress nodes to said single egress node via said plural
7 connection nodes are given, comprising the steps of:

8 adding a predetermined point to a score of a route successively
9 selected from said plural routes,

10 successively selecting said routes in reverse order of said
11 scores of said routes,

12 respectively generating trees from said route with a lowest
13 score and said other routes, and

14 successively generating other trees from said routes which are
15 unable to generate said trees,

16 wherein said step of adding said predetermined point to said
17 score of said selected route is carried out whenever either of

18 (1) a first condition that any node in a selected route does
19 not appear on another route except said egress node, or

20 (2) a second condition that, when there is a node which appears
21 in both said selected and another routes, said selected
22 route agrees with said another route from said node to said
23 egress node,

24 is satisfied,

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wherein said tree-structure solution can be read by a computer.

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